

second data acquisition methods being respectively different illumination, marking and data gathering combinations,

a field data storage device for storing said field data together with field location data corresponding thereto, and

a field data display device being operable to display simultaneously field data of said presently viewed field, acquired respectively by said first and said second data acquisition method, said field data being matchable by said field location data. --

[Amend Claim 2 to read as follows:]

--2 (Amended). A data acquisition and display system according to claim 1, wherein said field data is image data. --

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[Amend Claim 3 to read as follows:]

--3 (Amended). A data acquisition and display system according to claim 1, wherein said scannable field of interest is substantially larger than said presently viewed field such that a plurality of viewed fields are required to cover said scannable field of interest. --

[Amend Claim 4 to read as follows:]

--4 (Amended). A data acquisition and display system according to claim 2, wherein said scannable field of interest is substantially larger than said presently viewed field such that a plurality of viewed fields are required to cover said scannable field of interest. --

[Amend Claim 5 to read as follows:]

--5 (Amended). A data acquisition and display system according to claim 4, wherein said field data storage device is operable to store image data of an entirety of said scannable field of interest acquired according to said first data acquisition method. --

[Amend Claim 6 to read as follows:]

--6 (Amended). A data acquisition and display system according to claim 5, wherein said data acquisition device is operable to acquire image data of a presently viewed field of view using said second data acquisition method and said field data display device is operable to display said image data in conjunction with a corresponding image acquired using said first data acquisition method. --

[Amend Claim 7 to read as follows:]

--7 (Amended). A data acquisition and display system according to claim 1, wherein said data acquisition device is a microscope. --

[Amend Claim 8 to read as follows:]

--8 (Amended). A data acquisition and display system according to claim 7, wherein said data acquisition device is a microscope and wherein said microscope is any one of a group comprising a light microscope, a scanning electron microscope and a transmission electron microscope. --

[Amend Claim 9 to read as follows:]

--9 (Amended). A data acquisition and display system according to claim 1, wherein said data acquisition device is a telescope. --

[Amend Claim 10 to read as follows:]

--10 (Amended). A data acquisition and display system according to claim 9, wherein said telescope is any one of a group comprising a refracting telescope, a reflecting telescope, an infra-red telescope, a radio telescope, a gamma-ray telescope, and an x-ray telescope. --

[Amend Claim 11 to read as follows:]

--11 (Amended). A data acquisition and display system according to claim 1, wherein said data acquisition device is terrestrially based. --

[Amend Claim 12 to read as follows:]

--12 (Amended). A data acquisition and display system according to claim 1, wherein said data acquisition device is suitable for being airborne. --

[Amend Claim 13 to read as follows:]

--13 (Amended). A data acquisition and display system according to claim 1, wherein said data acquisition device is suitable for being spaceborne. --

Please delete claim 14.

[Amend Claim 15 to read as follows:]

--15 (Amended). An acquisition and display co-ordinator for co-ordinating between at least one image data acquisition device, operable for acquiring image data according to at least two data acquisition methods, and a data display device, said co-ordinator being operable to store image data obtained using a first data acquisition method together with location data of an image within a scannable field of interest, and to display said image simultaneously with an image having similar location data acquired using a second data acquisition method said first and second data acquisition methods being respectively different illumination, marking and data gathering combinations. --

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[Amend Claim 17 to read as follows:]

--17 (Amended). An acquisition and display co-ordinator according to claim 16, operable to store image data of an entirety of said scannable field of interest acquired according to said first data acquisition method. --

[Amend Claim 18 to read as follows:]

--18 (Amended). An acquisition and display co-ordinator according to claim 17, wherein said data acquisition device is operable to acquire image data of a presently viewed field of view using said second data acquisition method and said data display device is operable to display said image data in real time in conjunction with a corresponding image acquired using said first data acquisition method. --

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[Amend Claim 30 to read as follows:]

--30 (Amended). An acquisition and display co-ordinating method comprising the steps of:

acquiring first data of a field of view within a field of interest being scanned using a first data acquisition method,

storing said data together with field location data of said field of view within said field of interest being scanned,

subsequently acquiring second data of a corresponding field of view within said field of interest being scanned using a second data acquisition method, and

retrieving said first data using said field location data and simultaneously displaying said first data and said second data, said first and second data acquisition modes being respectively different illumination, marking and data gathering combinations. --

[Amend Claim 32 to read as follows:]

--32 (Amended). An acquisition and display co-ordinating method according to claim 31, wherein said first and second images, being simultaneously displayed, are superimposed one on the other. --

[Amend Claim 33 to read as follows:]

--33 (Amended). An acquisition and display co-ordinating method according to claim 31 wherein said first and second images, being simultaneously displayed, are displayed side by side. --

[Amend Claim 34 to read as follows:]

--34 (Amended). An acquisition and display co-ordinating method according to claim 31, wherein at least one of said first data and said second data is acquired using any one of a group comprising a thermal imager, a microscope, an image intensifier, a telescope, a camera, and a radar. --

[Amend Claim 37 to read as follows:]

--37 (Amended). An acquisition and display co-ordinating method according to claim 31, wherein at least one of said first and said second data is acquired using a member of a group comprising a telescope and a thermal imaging device, said member being operable to gather data at a plurality of different wavelengths and wherein each data acquisition method comprises gathering data at a different one of said wavelengths. --

[Amend Claim 38 to read as follows:]

--38 (Amended). A method of display of data acquired in at least two data acquisition methods from a scannable field of interest comprising:

- scanning the field of interest using a first data acquisition method,
- forming a plurality of first images of said field of interest,
- indexing said images,
- storing said indexed images,
- scanning the field of interest using a second data acquisition method to form at least one second image corresponding to one of said first images,
- determining from the indices which of said first images corresponds to said second image,

simultaneously displaying said second image and said corresponding first image, said first and second data acquisition method being respectively different illumination, marking and data gathering combinations. --

[Amend Claim 39 to read as follows:]

--39 (Amended). A method of display of data acquired in at least two data acquisition methods from a scannable field of interest comprising:

scanning the field of interest using a first data acquisition method,

forming a plurality of first images of said field of interest,

indexing said images,

storing said indexed images,

scanning the field of interest using a second data acquisition method to form at least one second image corresponding to an index of a predetermined one of said first images, and

simultaneously displaying said second image and said corresponding first image said first and second data acquisition methods being respectively different illumination, marking and data gathering combinations. --

[Amend Claim 40 to read as follows:]

-- 40. (Amended) A method of constructing an image gathering and display co-ordination system, the method comprising,

providing an image gathering device operable to gather image data, using a plurality of image gathering methods, according to externally provided positioning commands,

providing an image storing device and connecting said image storing device to said image gathering device such that said image storing device is able to store data gathered from said image gathering device in association with said externally provided positioning commands corresponding to said data, and

providing an image display device for simultaneously displaying a plurality of images gathered using different image gathering methods but with identical positioning commands said different image gathering methods being respectively different illumination, marking and data gathering combinations. --

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[Amend Claim 42 to read as follows:]

-- 42. (Amended) A control system for controlling an image data acquisition device, operable for acquiring image data according to at least two data acquisition methods, and a data display device, said control system being operable to store image data obtained using a first data acquisition method together with location data of said image data within a scannable field of interest, and to display image simultaneously with an image having similar location data acquired using a second data acquisition method said first and second data acquisition modes being respectively different illumination, marking and data gathering combinations. --

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[Amend Claim 43 to read as follows:]

-- 43. (Amended) A control system for controlling an imaging device and a display device together to permit a user to move over a field of interest with said imaging device to image the field in parts using one imaging method, and to display a current part on said display device whilst simultaneously and automatically displaying a second image of a same part of the field previously obtained using a different

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imaging method, the second image being automatically replaced as the imaging
device moves to a different part of the field of interest said said imaging methods *NAB*
being respectively different illumination, marking and data gathering combinations. --

Amend Claim 45 to read as follows:

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-- 45. (Amended) A data acquisition and display system comprising
at least one data acquisition device, operable to scan a field of interest and
acquire field data of parts having field location data, from said scannable field of
interest using each of at least a first and a second data acquisition method,
a field data storage device for storing said field data together with
corresponding field location data, and
a field data display device being operable to display simultaneously field
data, acquired respectively by said first and said second data acquisition method, said
field data being matchable by said field location data said first and second data
acquisition methods being respectively different illumination, marking and data
gathering combinations. --

Amend Claim 46 to read as follows:

--46 (Amended). A method of applying an intrinsic co-ordinate system to a
mount-and-object system to provide co-ordinated viewing of points on said object *NAB*
imaged using different image gathering methods, said image gathering methods being
respectively different illumination, marking and data gathering combinations, the
method comprising:
identifying a plurality of edge points in said mount and object system using
automatic image processing,

interpolating straight lines between said edge points,

identifying two perpendicular straight lines from said interpolated straight lines,

identifying a meeting point between said perpendicular straight lines,

defining said meeting point as an origin for said intrinsic co-ordinate system, and

using said co-ordinate system to provide automatic cross-referencing between

said points on said object imaged using said different image gathering methods. --

[Amend Claim 48 to read as follows:]

-- 48. (Amended) A method of imaging a mount-and-object system using an intrinsic co-ordinate system, comprising the steps of:

identifying a plurality of edge points in said mount and object system using automatic image processing,

interpolating straight lines between said edge points,

identifying two perpendicular straight lines from said interpolated straight lines,

identifying a meeting point between said perpendicular straight lines,

defining said meeting point as an origin for said intrinsic co-ordinate system,

making a plurality of images at different locations on said mount-and-object system, and

indexing said images based on its respective location expressed in terms of said intrinsic co-ordinate system, thereby to provide correspondence between regions on said object when imaged by different imaging methods, said different imaging methods being respectively different illumination, marking and data gathering combinations. --